

U.S. Patent Application Serial No. 10/510,396
Reply to Office Action dated December 22, 2005
Art. Unit: 1713

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A syntactic polyolefin composition for pipe coating, wherein the composition comprises:
a β -nucleated propylene polymer comprising 0.0001-2.0 weight% of a β -nucleating agent, and
a polyolefin homopolymer having a melt flow rate of 100-1500 g/10 min at 230°C/2.16 kg, and
microspheres,
said composition having a melt flow rate (MFR₂; ISO 1133, condition D) at 230°C/2.16kg in the range of 0.05-30 g/10 min and ~~in that the composition has an elongation at break of at least 3%.~~
2. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said composition has a melt flow rate (MFR₂; ISO 1133, condition D) at 230°C/2.16kg in the range of 0.5-10 g/10 min.
3. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said composition has an elongation at break of >5%.
4. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the β -nucleated propylene polymer is a (co)polymer which comprises at least 90.0

U.S. Patent Application Serial No. 10/510,396
Reply to Office Action dated December 22, 2005
Art. Unit: 1713

weight% of propylene and up to 10.0 weight% of α -olefins with 2 or 4 to 18 carbon atoms, and that the propylene polymer has a melt flow rate of 0.1-8 g/10 min at 230°C/2.16 kg.

5. (Cancelled)
6. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the amount of polyolefin is 0-20 weight%.
7. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the tensile modulus of the composition is at least 1500 MPa determined according to ISO 527.
8. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the compression strength at 20 MPa/80° determined according to ASTM D695, is > 10 MPa.
9. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the K-value of the composition is less than 0.190 W/m²K.
10. (Previously Presented) A syntactic polyolefin composition according claim 1, wherein the density of the composition is 500-850 kg/m³.
11. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres are made of glass, ceramics, epoxy resin, phenolic resin or urea-formaldehyde resin.

U.S. Patent Application Serial No. 10/510,396
Reply to Office Action dated December 22, 2005
Art. Unit: 1713

12. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres are untreated microspheres.

13. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres have an outer diameter of 1-500 μm .

14. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres are hollow.

15. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres are present in an amount of 10-50 weight% of the composition.

16. (Previously Presented) A method for the preparation of a syntactic polyolefin composition for pipe coating according to claim 1, wherein the microspheres are evenly distributed by melt mixing in a composition comprising a β -nucleated propylene polymer and microspheres, said composition having a melt flow rate at 230°C/2.16kg in the range 0.05-30 g/10min and in that the composition has an elongation at break of at least 3%.

17. (Previously Presented) A method according to claim 16, wherein said microspheres are added to the molten polymer.

18. (Previously Presented) A method according to claim 16, wherein the composition is compounded/homogenised and extruded as a coating on an off-shore pipe in one continuous step.

19. (Previously Presented) A method according to claim 16, wherein the composition is pelletized in a first step and in a subsequent step extruded as a coating on an off-shore pipe.

U.S. Patent Application Serial No. 10/510,396
Reply to Office Action dated December 22, 2005
Art. Unit: 1713

20. (Previously Presented) An off-shore pipe coated with a syntactic polyolefin composition, wherein the pipe is coated with a composition according to claim 1.

21. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said composition has a melt flow rate (MFR₂; ISO 1133, condition D) at 230°C/2.16kg in the range of 1.0-5 g/10 min.

22. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said composition has an elongation at break of >10%.

23. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the amount of polyolefin is 15-20 weight%.

24. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein the compression strength at 20 MPa/80° determined according to ASTM D695, is >15 MPa.

25. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres have an outer diameter of 5-200 µm.

26. (Previously Presented) A syntactic polyolefin composition according to claim 1, wherein said microspheres are present in an amount of 20-30 weight% of the composition.